

# ***Infant Mortality***



# Infant Mortality

During 2003, there were 73 South Dakota resident infant deaths reported for an infant mortality rate of 6.6 per 1,000 live births. In comparison, there were 70 infant deaths in 2002, with the infant mortality rate of 6.5 per 1,000 live births. Caution should be used when comparing these annual rates, because the number of South Dakota resident births creates a relatively small denominator to determine infant mortality rates; a small change in the number of infant deaths can result in a relatively large rate change. For example, as Table 21 displays and Figure 7 illustrates, an increase of 37 infant deaths from 1985 to 1986 caused a relatively large upward spike in the infant death rate for this period. However, in the years

## An Overview: 2003

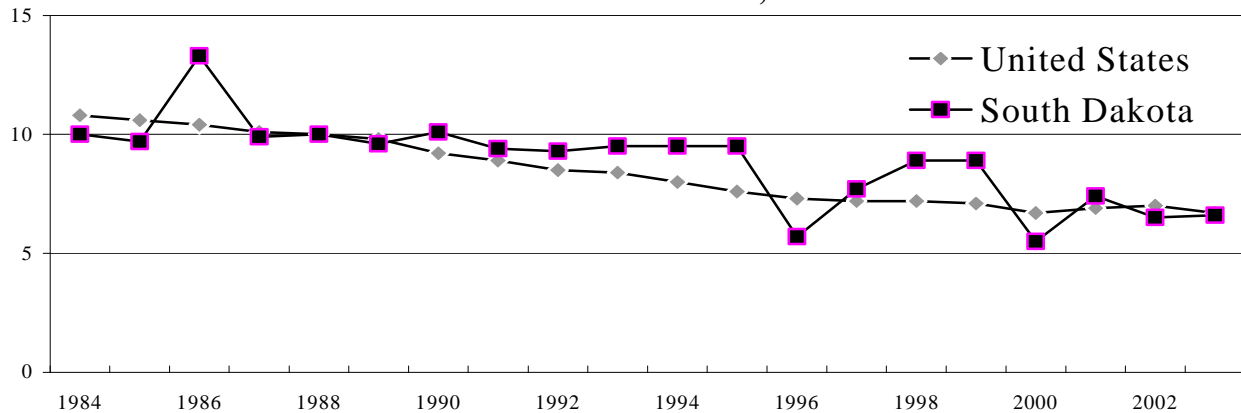
Infant Deaths	
Number	73
Rate per 1,000 Live Births	6.6
Neonatal Deaths	
Number	35
Rate per 1,000 Live Births	3.2
Postneonatal Death	
Number	38
Rate per 1,000 Live Births	3.4
Fetal Deaths	
Number	36
Rate per 1,000 Live Births + fetal deaths	3.3

**Table 21**  
**Resident Infant Deaths and Infant Mortality Rates**  
**South Dakota and United States, 1984-2003**

Year	United States		South Dakota	
	Number	Mortality Rate	Number	Mortality Rate
2003	*27,500	*6.7	73	6.6
2002	28,034	7.0	70	6.5
2001	27,568	6.8	78	7.4
2000	27,200	6.7	57	5.5
1999	27,937	7.1	94	8.9
1998	28,371	7.2	92	8.9
1997	28,045	7.2	78	7.7
1996	28,487	7.3	60	5.7
1995	29,583	7.6	99	9.5
1994	31,710	8.0	100	9.5
1993	33,466	8.4	102	9.5
1992	34,628	8.5	102	9.3
1991	36,766	8.9	103	9.4
1990	38,351	9.2	111	10.1
1989	39,655	9.8	106	9.6
1988	38,910	10.0	112	10.0
1987	38,380	10.1	114	9.9
1986	38,891	10.4	155	13.3
1985	40,030	10.6	118	9.7
1984	39,580	10.8	124	10.0

Note: \* U.S. 2003 data are provisional.  
Infant mortality rates are per 1,000 live births.  
Source: National Center for Health Statistics  
South Dakota Department of Health

**Figure 7**  
**Resident Infant Mortality Rates**  
**South Dakota and United States, 1984-2003**



Note: Rate Per 1,000 Live Births.

U.S. 2003 data are provisional.

Source: National Center for Health Statistics and South Dakota Department of Health

following 1986, the infant death rate was approximately the same as 1985. Downward spikes can be seen in 1996 and again in 2000. In other words, this measurement should be monitored over a period of time. Table 22 lists the overall leading causes of infant death for the last five years. In 2003,

leading causes of infant death can be broken down as follows: certain conditions in perinatal period, 24.7 percent; congenital anomalies, 35.6 percent; sudden infant death syndrome, 19.2 percent; and accidents, for 4.1 percent.

**Table 22**  
**South Dakota Resident Leading Causes of**  
**Infant Death, 1999-2003**

	Total	Year of Death	
		2003	2002-1999
<b>Total Deaths</b>	<b>372</b>	<b>73</b>	<b>299</b>
<b>Causes of Death</b>			
<b>Certain Conditions in Perinatal Period.....(P00-P96)</b>	<b>125</b>	<b>18</b>	<b>107</b>
Disorders related to short gestation and low birth weight.....(P07)	33	6	27
Extremely low birth weight or extreme immaturity.....(P07.0-P07.2)	27	5	22
Newborn affected by complications of placenta, cord, and membranes.....(P02)	16	3	13
All other conditions originating in perinatal period	49	4	45
<b>Congenital Anomalies.....(Q00-Q99)</b>	<b>98</b>	<b>26</b>	<b>72</b>
Congenital malformations of heart.....(Q20-Q24)	22	6	16
Congenital malformations and deformations of musculoskeletal system, limbs and integument.....(Q65-Q85)	15	5	10
All other congenital anomalies	61	15	56
<b>Sudden Infant Death Syndrome.....(R95)</b>	<b>71</b>	<b>14</b>	<b>57</b>
<b>Accidents.....(V01-X59)</b>	<b>18</b>	<b>3</b>	<b>15</b>
<b>All Other Causes</b>	<b>60</b>	<b>12</b>	<b>48</b>

Source: South Dakota Department of Health

There were 35 neonatal deaths (deaths occurring to infants from birth through 27 days old) for a rate of 3.2 deaths per 1,000 live births. There were 38 postneonatal deaths (deaths occurring to infants 28 days to 1 year of age) for a rate of 3.4 deaths per 1,000 live births. In comparison, the 2002 neonatal and postneonatal rates were 3.6 and 3.0 per 1,000 live births, respectively. The number of fetal deaths decreased from 39 in 2002 to 36 in 2003, with a corresponding decrease in the fetal death rate from 3.6 (per 1,000 live births plus fetal deaths) in 2002 to 3.3 in 2003.

### Infant Mortality by Race

Table 23 indicates that from 2002 to 2003, the number of South Dakota resident infant deaths increased for both whites and American Indians. As a result, the infant mortality rate per 1,000 live births rose for whites in 2003. The infant mortality rate actually decreased for American Indians because of the increase in American Indian births in 2003. American Indian infant mortality rates were also significantly higher than whites in 2003 and for the 20 year total.

**Table 23**  
**South Dakota Resident Infant Deaths and Mortality Rates**  
**by Infant's Race, 1984-2003**

Year	Race of Infant				Total	
	White		American Indian			
	Number	Rate	Number	Rate	Number	Rate
2003	43	5.0	27	12.9	73	6.6
2002	41	4.7	26	14.4	70	6.5
2001	52	6.1	25	14.1	78	7.4
2000	36	4.3	19	11.3	57	5.5
1999	66	7.6	24	14.4	94	8.9
1998	61	7.3	29	16.9	92	8.9
1997	45	5.3	30	19.5	78	7.7
1996	39	4.5	20	12.3	60	5.7
1995	69	7.9	30	19.2	99	9.5
1994	66	7.5	33	21.5	100	9.5
1993	67	7.6	35	20.3	102	9.5
1992	69	7.6	32	18.4	102	9.3
1991	73	8.1	25	15.0	103	9.4
1990	77	8.4	33	19.8	111	10.1
1989	64	7.0	40	22.8	106	9.6
1988	87	9.3	25	14.7	112	10.0
1987	76	7.9	36	21.2	114	9.9
1986	100	10.2	52	31.0	155	13.3
1985	89	8.6	29	17.2	118	9.7
1984	94	8.8	28	17.1	124	10.0
1984-2003	1,314	7.3	598	17.6	1,948	8.9

Note: Failure of the races to add to the total is due to other and unknown races.

Infant mortality rates are per 1,000 live births.

Source: South Dakota Department of Health

When analyzed by race, Table 24 indicates that the South Dakota resident neonatal mortality rate per 1,000 live births decreased for both whites

and American Indians from 2002 to 2003. The American Indian infant mortality rate is significantly higher than whites for the 20 year total.

**Table 24**  
**South Dakota Resident Neonatal Deaths and**  
**Mortality Rates by Infant's Race, 1984-2003**

Year	Race of Infant				Total	
	White		American Indian			
	Number	Rate	Number	Rate	Number	Rate
2003	22	2.5	11	5.3	35	3.2
2002	24	2.8	12	6.6	38	3.6
2001	27	3.2	9	5.1	37	3.5
2000	24	2.9	7	4.2	32	3.1
1999	43	5.0	10	6.0	57	5.4
1998	34	4.1	11	6.4	46	4.5
1997	28	3.3	10	6.5	40	3.9
1996	20	2.3	11	6.7	31	3.0
1995	40	4.6	14	9.0	54	5.2
1994	37	4.2	20	13.0	57	5.4
1993	37	4.2	16	9.3	53	4.9
1992	44	4.8	12	6.9	56	5.1
1991	43	4.7	13	7.8	59	5.4
1990	43	4.7	15	9.0	58	5.3
1989	34	3.7	16	9.1	51	4.6
1988	56	6.0	6	3.5	62	5.5
1987	43	4.5	13	7.7	57	5.0
1986	60	6.1	23	13.7	84	7.2
1985	54	5.2	10	5.9	64	5.3
1984	53	5.0	12	7.3	67	5.4
1984-2003	766	4.2	251	7.4	1,038	4.8

Note: Failure of the races to add to the total is due to other and unknown races.  
Neonatal mortality rates are per 1,000 live births.  
Source: South Dakota Department of Health

Table 25, below, indicates that the postneonatal mortality rate per 1,000 live births increased for white infants and decreased for American Indian infants from 2002 to 2003.

Although American Indian infant mortality rates decreased they are still significantly higher than whites in 2003 and for the 20 year total.

**Table 25**  
**South Dakota Resident Postneonatal Deaths and**  
**Mortality Rates by Infant's Race, 1984-2003**

Year	Race of Infant				Total	
	White		American Indian			
	Number	Rate	Number	Rate	Number	Rate
2003	21	2.4	16	7.7	38	3.4
2002	17	2.0	14	7.8	32	3.0
2001	25	2.9	16	9.0	41	3.9
2000	12	1.4	12	7.1	25	2.4
1999	23	2.7	14	8.4	37	3.5
1998	27	3.2	18	10.5	46	4.5
1997	17	2.0	20	13.0	38	3.7
1996	19	2.2	9	5.5	29	2.8
1995	29	3.3	16	10.2	45	4.3
1994	29	3.3	13	8.5	43	4.1
1993	30	3.4	19	11.0	49	4.6
1992	25	2.8	20	11.5	46	4.2
1991	30	3.3	12	7.2	44	4.0
1990	34	3.7	18	10.8	53	4.8
1989	30	3.3	24	13.7	55	5.0
1988	31	3.3	19	11.2	50	4.5
1987	33	3.4	23	13.5	57	4.9
1986	40	4.1	29	17.3	71	6.1
1985	35	3.4	19	11.3	54	4.4
1984	41	3.8	16	9.8	57	4.6
1984-2003	548	3.0	347	10.2	910	4.2

Note: Failure of the races to add to the total is due to other and unknown races.  
Postneonatal mortality rates are per 1,000 live births.  
Source: South Dakota Department of Health

Table 26 shows that the overall leading cause of infant death for South Dakota residents was certain conditions in perinatal period. These conditions include disorders related to short gestation and low birth weight, newborn affected by complications of placenta, cord, and membranes, and intrauterine hypoxia, and birth asphyxia. Certain conditions in perinatal period accounted for 33.6 percent of all infant deaths in South Dakota.

When analyzed by race, the leading cause of death for both white and American Indian infants was certain conditions in perinatal period. Certain conditions in perinatal period comprised 88 white infant deaths or 36.9 percent of all white infant deaths, while it accounted for 32 American Indian infant deaths or 26.4 percent of all American Indian infant deaths.

**Table 26**  
**South Dakota Resident Infant Deaths by Cause of Death and Race, 1999-2003**

	Total	Race	
		White	American Indian
<b>Total</b>	<b>372</b>	<b>238</b>	<b>121</b>
<b>Causes of Death</b>			
<b>Certain Conditions in Perinatal Period..... (P00-P96)</b>	<b>125</b>	<b>88</b>	<b>32</b>
Disorders related to short gestation and low birth weight..... (P07)	33	20	11
Newborn affected by complications of placenta, cord, and membranes..... (P02)	16	12	3
Intrauterine hypoxia and birth asphyxia..... (P20-P21)	11	7	4
All other conditions originating in the perinatal period	65	49	14
<b>Congenital Anomalies .....(Q00-Q99)</b>	<b>98</b>	<b>74</b>	<b>21</b>
Congenital malformations of heart..... (Q20-Q24)	22	17	4
Anencephaly and similar malformations ..... (Q00)	11	6	4
Congenital malformations of respiratory system..... (Q30-Q34)	11	7	3
All other congenital anomalies	54	44	10
<b>Sudden Infant Death Syndrome ..... (R95)</b>	<b>71</b>	<b>36</b>	<b>34</b>
<b>Accidents ..... (V01-X59)</b>	<b>18</b>	<b>8</b>	<b>10</b>
<b>All Other Causes</b>	<b>60</b>	<b>32</b>	<b>24</b>

Note: Numbers following cause of death are ICD-10 codes.  
Failure of the races to add to the total is due to other and unknown races.  
Source: South Dakota Department of Health

### Infant Mortality and Birth Weight

According to Table 27, low birth weight infants, infants who are less than 2,500 grams, accounted for 51.9 percent of the South Dakota resident infant deaths from 1999 to 2003.

When separated by age, 77.9 percent of the resident neonatal deaths and 22 percent of all resident postneonatal deaths from 1999 to 2003 were low birth weight infants.

**Table 27**  
**South Dakota Resident Neonatal and Postneonatal Infant**  
**Deaths by Race of Infant and Birth Weight, 1999-2003**

Race of Infant	All Birth Weights	Birth Weight in Grams	
		2499 or less	2500 +
<b>All Races</b>	<b>372</b>	<b>193</b>	<b>177</b>
<b>Neonatal</b>	<b>199</b>	<b>155</b>	<b>43</b>
White	140	109	31
American Indian	49	40	8
<b>Post-Neonatal</b>	<b>173</b>	<b>38</b>	<b>134</b>
White	98	22	75
American Indian	72	16	56

Note: Failure of the races to add to the total is due to other and unknown races.  
Source: South Dakota Department of Health



